

VISIT...

LANZAROTE
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Tutor Teaching Tips

Repeated Reading • V-4

MATERIALS

Reading
Passage:
Part 1 (2 copies)

Timing device;
Graph

Reading
Passage:
Part 2 (2 copies)

Game cards;
Game board;
Markers

Introducing the Passage 5 minutes

Read part 1 of the passage *Robots* to provide a model of fluent reading. Read with expression at a normal reading pace, taking about one minute to read the passage.

Give the child a copy of the passage. Read the passage again, having the child read along with you. If he/she has difficulty reading along, slow the pace or read a small chunk (one or two sentences), and then have the child read that chunk with you. Continue reading smaller chunks until you and the child have read the entire passage. Read the entire passage with the child one or two more times.

Building Fluency 5–10 minutes

Have the child read the passage out loud while you time him/her for one minute. As the child reads, place a check mark on your copy of the passage over each word that he/she misreads. If the child pauses for three seconds, tell him/her the word and mark it as an error. Do not correct errors during the reading. After one minute, tell the child to stop. Circle the last word the child read. Help the child plot the number of words read on the graph. The goal is 130 words per minute with at least 90% accuracy.

Discuss errors once the child has completed the reading. Discuss word-attack strategies such as sounding out parts of words, looking for smaller words or recognizable chunks within larger words, and thinking about how the meanings of words relate to other parts of the text.

Do not exceed more than four independent readings of a passage in a single session. If the child seems to have too much difficulty, drop to a lower level during the next tutoring session.

Checking for Understanding 5 minutes

Ask the child to retell the passage. Look for detail in his/her retelling. Give the child time to respond independently. If needed, prompt with the following questions:

What are robots? (machines with computer brains)

How do robots do their jobs? (They are programmed step-by-step.)

What does specialized mean? (can perform only one job)

If time permits, repeat the steps above using part 2 of the passage, *Robots*.

Optional Activity 5–10 minutes

PLAYING A WORD GAME: Shuffle the game cards and stack them face down on the table. Have the child draw a card, read the word, and use it in a sentence. If the child is correct, he/she moves a marker on the game board the number of spaces indicated on the card. If incorrect, he/she cannot move. Have the child place the card at the bottom of the stack. It is now your turn. Repeat the game as time permits.

Part 1

Robots are machines with mechanical bodies, information sensors, and 9
 computer brains. They can be programmed to move and do certain 20
 tasks. Many robots can also gather information from the world around 31
 them by using devices such as video cameras and microphones. A 42
 programmer plans the robot's job step by step. Most robots cannot 53
 handle anything that they have not been programmed to handle. 63

Simple robots can perform simple tasks, like moving car parts on an 75
 assembly line. For this job, the robot only needs one arm, a sensor that 89
 tells it where the parts are, and a program that governs lifting the part 103
 and putting it down in the right place. 111

As robots get more complex, more programs have to be packed into 123
 their computer brains. It is much easier to build ten robots that do ten 137
 different things than it is to build one robot to do those ten things. Robots 152
 tend to be specialized for the tasks they perform. A huge robot arm 165
 looks very different from a small explorer robot, and they could not do 178
 each other's job. 181



Assembly line arm

The space
shuttle's arm



Mars rover
gathering
samples

Part 2

Dante II is an eight-legged crawler robot built to retrieve super-heated gas samples from inside Mount Spurr, an Alaskan volcano. It was damaged during its mission, but Dante II successfully obtained its samples.

The remote-controlled Nomad explored the Atacama Desert in Chile, traveling 133 miles in 45 days while collecting rock and soil samples. The Atacama Desert is similar to the terrain on the Moon and Mars. Next, Nomad will explore icy Antarctica.

The Sojourner robot, based on Nomad's design, explored the surface of Mars in 1997. In 2004, the robots Spirit and Opportunity landed on Mars and explored its surface. These twin robots acted like "robot geologists," using robotic arms with many instruments to study rocks. These robots could drill into rocks, magnify them, and use special sensors to tell what the rocks were made of.

Robots don't need food, water, or air. They don't age or get bored, and they don't even need a return trip home. For these reasons, much future space exploration will involve robots rather than people.



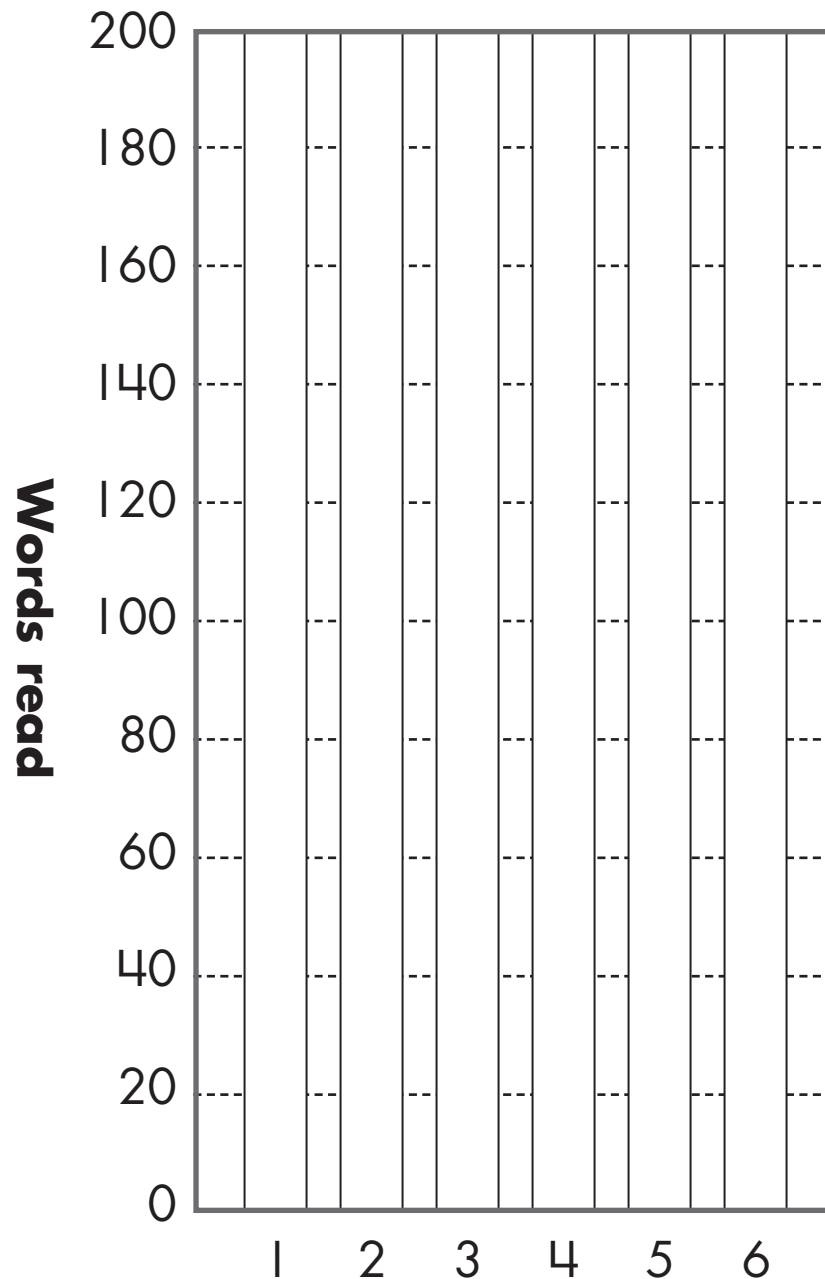
Dante II

Fluency

Repeated Reading Bar Graph

Lesson V-4

Name _____ Date _____



Number
of errors: _____
1 2 3 4 5 6



sensors 3	computer 2	brain 2	robot 1
specialized 2	explorer 3	programmed 4	complex 2
instruments 4	arm 1	tasks 1	sample 2
bored 2	crawler 3	mechanical 3	camera 1

Fluency

Game Board

Lesson V-4

